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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/723,933

11/26/2003

Kenneth D. James

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EXAMINER

KOSAR, ANDREW D

ART UNIT

PAPER NUMBER

1654

MAIL DATE

DELIVERY MODE

02/04/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/723,933	<b>Applicant(s)</b> JAMES ET AL.	
	<b>Examiner</b> ANDREW D. KOSAR	<b>Art Unit</b> 1654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14-51, 86, 89-94, 96-98, 100-103 and 105-181 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

Continuation of Disposition of Claims: Claims withdrawn from consideration are 10,12,14-27,30-39,43-51,102,107,108,110,111,114-155 and 160-181.

Art Unit: 1654

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election of Group I and the species BN-021 in the reply filed on August 27, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant has indicated that claims 1-9, 11, 23-29, 31, 40, 41, 49, 86, 89-94, 96-98, 101-103, 105-113 and 156-159 are readable upon the elected invention/species, however the examiner has determined that claims 1-9, 11, 28, 29, 31, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159 read upon the election.

Claims 10, 12, 14-27, 30, 31, 32-39, 43-51, 102, 107, 108, 110, 111, 114-155 and 160-181 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention/species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on August 27, 2008.

Claims 13, 52-85, 87, 88, 95, 99 and 104 stand cancelled.

Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159 have been examined on the merits.

### ***Priority***

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 119(e) as follows:

Art Unit: 1654

The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

The disclosure of the prior-filed application, Application No. 60/429,151, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. The instant PEG molecule of Formula (III) is not found in the disclosure of the Provisional Application, and thus does not provide support for the claims. Thus, the priority date for art purposes is the instant filing date of November 26, 2003.

### ***Claim Objections***

**Claims 2-9, 11 and 100** are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claims recite properties which are inherent features imparted by the PEG moiety, and thus do not add any further structural limitations to the claim and are not further limiting.

Art Unit: 1654

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 158 and 159 recites: A natriuretic compound conjugate comprising: (a) a biologically active natriuretic compound comprising:

(i) a natriuretic molecule NPR-A binding site; and

(ii) at least one modifying moiety conjugation site;

wherein the natriuretic compound comprises a peptide or a biologically active peptide segment of brain natriuretic peptide, atrial natriuretic peptide, C-type natriuretic peptide, or dendroaspis natriuretic peptide; and

at least one modifying moiety attached to said modifying moiety conjugation site, wherein the modifying moiety has a formula:..., which renders the claims indefinite.

The claim recites the conjugate comprises (i) and (ii), then immediately following recites it comprises a peptide... and at least one modifying moiety...

The claim appears to have two definitions as to what the compound comprises, as a natriuretic molecule NPR-A binding site is a receptor, and BNP, ANP, etc. are substrates/ligands for such receptors. Further, it is unclear if the claim is requiring the receptor, the ligand/substrate and two modifying moieties (one on each). This is in contrast to Applicant's election which appears to be a single PEGylated BNP molecule.

Art Unit: 1654

Further, it is unclear whether the peptide of the 'natriuretic compound comprises' clause (line 4) is any peptide, or whether it is limited to ANP, BNP, CNP or DNP.

Additionally, it is unclear from the formula where the peptide is attached, as there is no description of the attachment point found in the claim. As drawn, It appears as if there is an acetyl group at the point of attachment to the peptide. Further, there is an element (a) in claim 1, however there is no corresponding (b).

Claim 86 recites the modifying moiety comprises linear or branched polyalkylene glycol moiety, however it is unclear whether this is an additional feature (e.g. further comprises), or if this is the feature of Formula(III) being defined. Formula (III) is structurally defined, thus it lacks clear antecedent basis for the 'further comprising' interpretation and is not further limiting.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

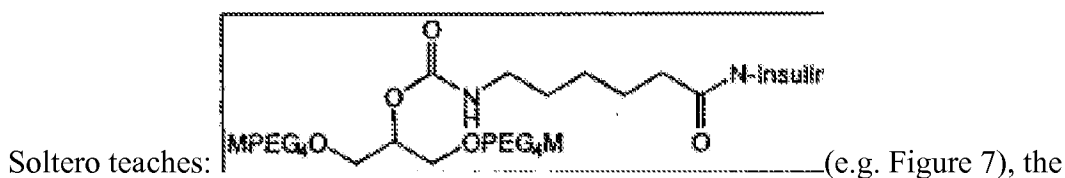
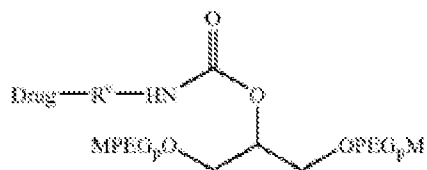
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113**

**and 156-159** are rejected under 35 U.S.C. 102(a) as being anticipated by US 2003/0069170 A1.

The rejection is set forth on the interpretation that “the natriuretic peptide comprises a peptide” and the alternative is a fragment of ANP, BNP, CNP, or DNP. In this interpretation, the peptide is not limited to BNP, etc. Further, the reference is applied under 35 USC 102(a) because the reference was published prior to the priority date granted, as discussed above under Priority.

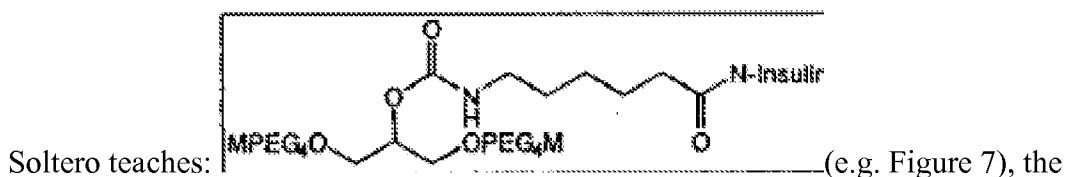
Art Unit: 1654

MPEG<sub>7</sub> variant (e.g. Figure 8), and the generic structure

(Formula VII, ¶ [0209]). Soltero teaches a myriad of peptides

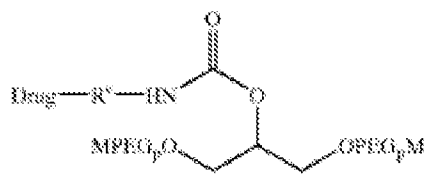
usable in the conjugate, including BNP (¶ [0054]), and teaches pharmaceutical compositions of the conjugates (e.g. spanning ¶ [0228]- [0237]).

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected under 35 U.S.C. 102(a) as being anticipated by US 2003/0083232 A1. The rejection is set forth on the interpretation that “the natriuretic peptide comprises a peptide” and the alternative is a fragment of ANP, BNP, CNP, or DNP. In this interpretation, the peptide is not limited to BNP, etc. Further, the reference is applied under 35 USC 102(a) because the reference was published prior to the priority date granted, as discussed above under Priority.

MPEG<sub>7</sub> variant (e.g. Figure 8), and the generic structure



Art Unit: 1654



(Formula VII, ¶ [0125]). Soltero teaches pharmaceutical

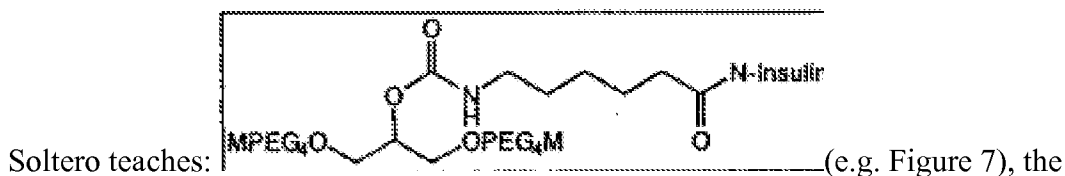
compositions of the conjugates (e.g. spanning ¶ [0143]- [0153]).

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,770,625 B2.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

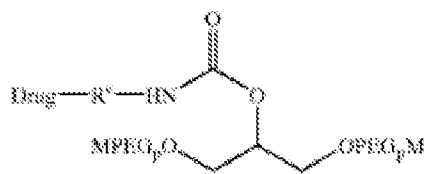
‘625 corresponds to the issued patent of the '170 PGPub, above.

The rejection is set forth on the interpretation that “the natriuretic peptide comprises a peptide” and the alternative is a fragment of ANP, BNP, CNP, or DNP. In this interpretation, the peptide is not limited to BNP, etc. Further, the reference is applied under 35 USC 102(a) because the reference was published prior to the priority date granted, as discussed above under Priority.



MPEG<sub>7</sub> variant (e.g. Figure 8), and the generic structure

Art Unit: 1654



(Formula VII, column 33). Soltero teaches a myriad of

peptides usable in the conjugate, including BNP (column 8, lines 16-21), and teaches pharmaceutical compositions of the conjugates (e.g. spanning columns 36-40).

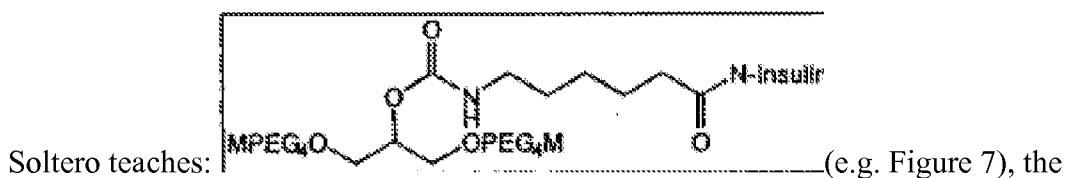
**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,867,183 B2.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

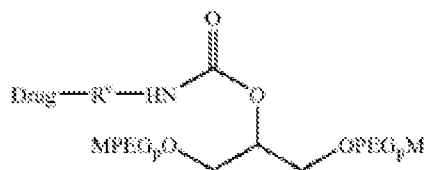
‘183 corresponds to the issued patent of the ‘232 PGPub, above.

The rejection is set forth on the interpretation that “the natriuretic peptide comprises a peptide” and the alternative is a fragment of ANP, BNP, CNP, or DNP. In this interpretation, the peptide is not limited to BNP, etc. Further, the reference is applied under 35 USC 102(a) because the reference was published prior to the priority date granted, as discussed above under Priority.

Art Unit: 1654



MPEG<sub>7</sub> variant (e.g. Figure 8), and the generic structure



(Formula VII, column 17). Soltero teaches pharmaceutical

compositions of the conjugates (e.g. spanning columns 20-23).

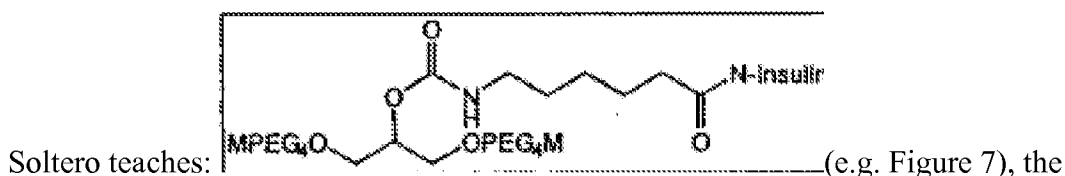
**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected under 35 U.S.C. 102(e) as being anticipated by US 7,030,082 B2.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

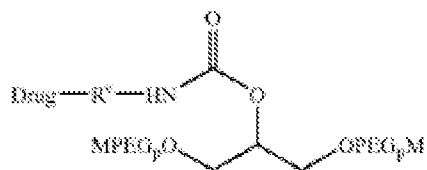
‘082 is a CIP of both the ‘183 and ‘625 patents, both discussed above.

The rejection is set forth on the interpretation that “the natriuretic peptide comprises a peptide” and the alternative is a fragment of ANP, BNP, CNP, or DNP. In this interpretation, the peptide is not limited to BNP, etc. Further, the reference is applied under 35 USC 102(a) because the reference was published prior to the priority date granted, as discussed above under Priority.

Art Unit: 1654



MPEG<sub>7</sub> variant (e.g. Figure 8), and the generic structure



(Formula VII, column 33). Soltero teaches a myriad of

peptides usable in the conjugate, including BNP (column 8, lines 54-59), and teaches

pharmaceutical compositions of the conjugates (e.g. spanning columns 36-41).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected under 35 U.S.C. 103(a) as being obvious over US 7,030,082 B2 or US 6,770,625 B2 or US 2003/0069170 A1.

With regards to '082 and '625, the applied references have a common inventor with the instant application. Based upon the earlier effective U.S. filing dates of the references, they constitute prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application

Art Unit: 1654

which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C. 103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With regards to '170, the reference is only prior art under 35 USC 102(a), being 'by another' as discussed above.

The rejection is set forth in the interpretation that BNP is conjugated to the PEG molecule. The references are generally cumulative in their teaching, '082 being a CIP of '625 (and '170 being the PG PUB of '625), and therefore the rejections are discussed with respect to '625.

The instant claims, in light of the election of BN-021, are drawn generally to PEGylated BNP conjugates.

The teachings of Soltero are presented above.

It would have been obvious to have formed any PEGylated conjugate, including the BNP-PEG conjugate BN-021, as Soltero teaches a myriad of peptides/drugs capable of being PEGylated. including BNP, and teaches a myriad of PEG molecules, including the specific PEG of the election (e.g. Figure 7), a related MPEG (e.g. Figure 8) the generic structure (e.g. Formula VII). One would have been motivated to have made any of the conjugates, including that of BN-021, as Soltero provides instruction that the peptides can be PEGylated with the various PEG

Art Unit: 1654

moieties, including the generic Formula VII, and provides detailed description as to how one synthesizes the conjugates, including how one controls the reactions. One would have a reasonable expectation that the PEG conjugate would have the predictable advantages/properties recited in the instant claims, as they are well established properties imparted by PEGylation of proteins/peptides.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976). In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting

Art Unit: 1654

ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 7-9, 11, 13, 41-50, 102, 105-110, 112-116, 118, 121, 122, 125, 128 and 129 of copending Application No. 10/999,761 (claim set of 10/4/08). Although the conflicting claims are not identical, they are not patentably distinct from each other because the conjugates of '761 anticipate the instant claims, specifically conjugates of formula III of '761.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 7, 8 and 10-58 of copending Application No. 11/138,194 (claim set of 11/18/08). Although the conflicting claims are not identical, they are not patentably distinct from each other because the compounds of '194 anticipate the instant claims, being conjugates, e.g. PEGylated hBNP, and because they satisfy the structural limitations of claim 1, they would necessarily have the claimed functional characteristics.

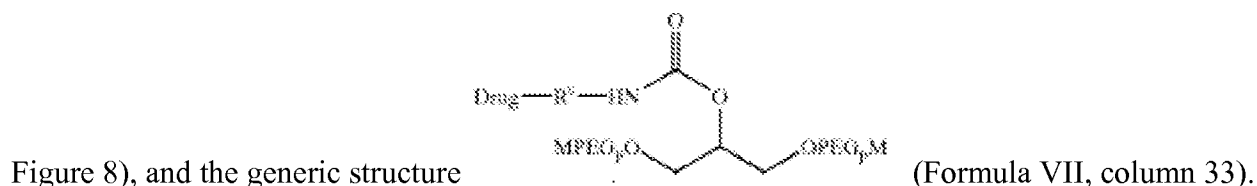
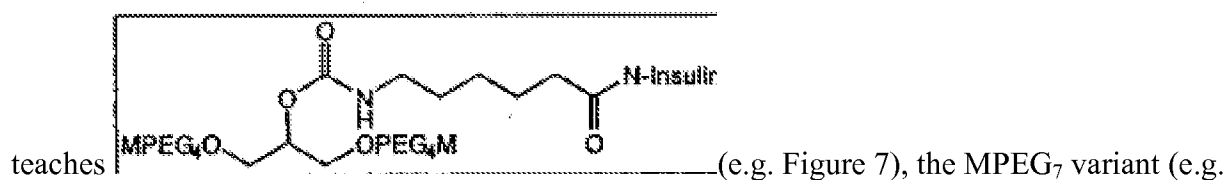
This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Art Unit: 1654

**Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10, 14-25, 30, 31, 36-46 and 51-67 of U.S. Patent No. 7,030,082 B2 or US 6,770,625 B2.

Soltero teaches pharmaceutical compositions of drug-oligomer conjugates (e.g. claim 1).

In looking to the specification for the portions that provide support for the claims, Soltero



Soltero teaches a myriad of peptides usable in the conjugate, including BNP (column 8, lines 54-59), and teaches pharmaceutical compositions of the conjugates (e.g. claim 1).

It would have been obvious to have formed any PEGylated conjugate, including the BNP-PEG conjugate BN-021, as Soltero teaches a myriad of peptides/drugs capable of being PEGylated. including BNP, and teaches a myriad of PEG molecules, including the specific PEG e.g. Figure 7, a related MPEG (e.g. Figure 8) the generic structure (e.g. Formula VII). One would have been motivated to have made any of the conjugates, including that of BN-021, as Soltero provides instruction that the peptides can be PEGylated with the various PEG moieties, including the generic Formula VII, and provides detailed description as to how one synthesizes the conjugates, including how one controls the reactions. One would have a reasonable



Art Unit: 1654

expectation that the PEG conjugate would have the predictable advantages/properties recited in the instant claims, as they are well established properties imparted by PEGylation of proteins/peptides.

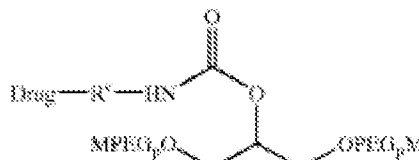
A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976). In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

**Claims 1, 2, 7-9, 11, 13, 41-50, 102, 105-110, 112-116, 118, 121, 122, 125, 128 and 129** are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15, 19-36, 40-54, 58-76 and 127-130 of U.S. Patent No. 6,770,625 B2.

Soltero teaches pharmaceutical compositions of drug-oligomer conjugates (e.g. claims 1 and 130). In looking to the specification for the portions that provide support for the claims,



Art Unit: 1654



variant (e.g. Figure 8), and the generic structure (Formula VII,

column 33). Soltero teaches a myriad of peptides usable in the conjugate, including BNP (column 8, lines 16-21), and teaches pharmaceutical compositions of the conjugates (e.g. claim 1).

It would have been obvious to have formed any PEGylated conjugate, including the BNP-PEG conjugate BN-021, as Soltero teaches a myriad of peptides/drugs capable of being PEGylated, including BNP, and teaches a myriad of PEG molecules, including the specific PEG of Figure 7, a related MPEG (e.g. Figure 8) the generic structure (e.g. Formula VII). One would have been motivated to have made any of the conjugates, including that of BN-021, as Soltero provides instruction that the peptides can be PEGylated with the various PEG moieties, including the generic Formula VII, and provides detailed description as to how one synthesizes the conjugates, including how one controls the reactions. One would have a reasonable expectation that the PEG conjugate would have the predictable advantages/properties recited in the instant claims, as they are well established properties imparted by PEGylation of proteins/peptides.

A reference is good not only for what it teaches by direct anticipation but also for what one of ordinary skill in the art might reasonably infer from the teachings. (*In re Opprecht* 12 USPQ 2d 1235, 1236 (Fed Cir. 1989); *In re Bode* 193 USPQ 12 (CCPA) 1976). In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a). From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable

Art Unit: 1654

expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Claims 1-9, 11, 28, 29, 40-42, 86, 89-94, 96-98, 100, 101, 103, 105, 106, 109, 112, 113 and 156-159 are directed to an invention not patentably distinct from claims 1-10, 14-25, 30, 31, 36-46 and 51-67 of commonly assigned US 7,030,082 B2 or claims 1-15, 19-36, 40-54, 58-76 and 127-130 of commonly assigned US 6,770,625 B2, for the reasons set forth above.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP Chapter 2300). Commonly assigned 6,770,625 and/or 7,030,082, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications pending on or after December 10, 2004.

Art Unit: 1654

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW D. KOSAR whose telephone number is (571)272-0913. The examiner can normally be reached on Monday - Friday 08:00 - 16:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cecilia J. Tsang can be reached on (571)272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Andrew D Kosar/  
Primary Examiner, Art Unit 1654